ABSTRACT OF THE DISCLOSURE

An information processing apparatus or a semiconductor memory according to the present invention periodically refreshes a high-speed nonvolatile memory cell having spontaneous data storing capability at the time of nonuse of the apparatus (or at the time of standby of the memory) by refresh control element. Thus, a combination of the spontaneous data retaining capability of the nonvolatile memory cell, the periodic refresh at the time of nonuse, and intermittent power supply by turning on/off switch means makes it possible to retain data reliably while minimizing power consumption at the time of standby. Thereby a memory system that can retain data reliably with minimum power consumption and enable high-speed access can be realized.